The above claims stand rejected under 35 U.S.C. §112, second paragraph as being indefinite due to minor infelicities. Applicants thank the Examiner for his helpful suggestions. Initially, Applicants note that the rejection of claim 3 is rendered moot in light of the present amendment wherein claim 3 has been canceled.

The Examiner has rejected claims 16, 18 and 19 as indefinite due to minor infelicities. The aforementioned claims have been amended to meet this rejection. Consequently, the above requested amendment to these claims is sufficient to overcome the grounds for their rejection. Accordingly, it is Applicants' position that the amended claims comply with section 35 U.S.C. §112 fully and provide a full, clear and concise instruction to any person skilled in the art as to the metes and bounds of the claimed invention. Applicants further maintain that amended claims 16, 18 and 19 particularly point out and distinctly claim that which the Applicants regards as their invention.

In view of the amendment herein presented, it is respectfully submitted that each point raised by the Examiner has been attended to. As such, reversal of the rejection on grounds of 35 U.S.C. §112, second paragraph is hereby respectfully requested.

II. The Rejection of Claims 3, 8, 9, 14 and 16 As Anticipated Under 35 U.S.C. §102 (a) By any one of GenBank Accession Numbers H14151, Z43654 or T07621, White et al. (Nature 1998), Jones et al. (Nature 1998) or Kaupmann et a. (Nature 1998) or Kuner et al. (Science 1999) respectively May Properly Be Withdrawn:

According to the Office Action, the prohibitions of 35 U.S.C. §102 (a) dictate rejection of claim 3 as anticipated by any one of GenBank Accession Numbers listed above. Applicants respectfully note that the cancellation of claim 3 by way of the instant amendment is sufficient to negate the grounds for the above rejection.

Claims 8, 9, 14 and 16 stand rejected as being anticipated by White et al. The gravamen of the Examiner's position with respect to this rejection is that White et al. teach human GABABR2, which has the same sequence as Hg20 of SEQ ID NO:2 of the instant application.

For reasons appearing here below, it is Applicants position that White et al. fail to bar patentability of the above claims because this reference fails to disclose each and every element of the above claims as is required by the law.

It is a well established principle of patent law that invalidity for anticipation requires that all of the elements and limitations of the claim are found within a single prior art

reference. *Carrela v. Starlight Archery and Pro Line Co.,* 804 F.2d 135, 138, 231 USPQ 644, 646 (Fed. Cir. 1986); RCA *Corp. v. Applied* Digital *Data Systems, Inc.,* 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). Indeed, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *See Kloster Speedsteel AB v. Crucible, Inc.,* 793 F.2d 1565, 1571, 230 USPQ 81, 84 (Fed. Cir. 1986) ("[A]bsence from the [prior art] reference of any claimed element negates anticipation."), *cert. denied,* 479 U.S. 1034 (1987).

Specifically, contrary to the Examiner assertion, White et al. DO NOT have the "same" sequence as HG20 of SEQ Id NO:1 as alleged at page 9 of the Office Action. In fact, Applicants have noted numerous differences between the sequence disclosed in White et al., Figure 1 (prior art sequence) and that claimed in the present application. For example the White et al sequence differs in at least the following 3 possessions from SEQ ID NO:1. At position 44, the White et al. Sequence depicts Argenine whereas the disclosed sequence (SEQ ID NO:1) depicts – Glutamine. Likewise, White et al. Disclose Argenine at positions 48 and 75, while SEQ ID NO:1 discloses a Glutamine. Other differences abound. Accordingly, since the prior art fails to disclose the identical sequence as claimed in the present application, the reference thus fails to anticipate the aforementioned claims.

Consequently, it is Applicants' position that the above referenced differences between White et al. and the present invention is fatal to a finding of anticipation as alleged in the Outstanding Office Action. Applicants respectfully request that the Examiner reconsider and withdraw the outstanding rejection in view of the above discussion.

With respect to the rejection of claims 14 and 16 as anticipated by one of Jones et al., Kaupmann et al. or Kuner et al., it is Applicants position that each of the aforementioned references teaches a RAT (Non-Human) DNA/amino acid sequence which is less than 100% identical (about 97%) to the sequences disclosed and claimed in the instant application.

For over a century, the courts have maintained that for a publication to constitute a bar under section 102, the claimed invention must be identical to the account published and as such the claimed invention must not be new. Scripps Clinic, 927 F.2d at 1576, 18 U.S.P.Q.2d at 1010; Titanium Metals Corp. Of Am. V. Banner, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777-78 (Fed.Cir. 1985); Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co., 730 F.2d 1452, 1458, 221 U.S.P.Q. 481, 485 (Fed.Cir. 1984). This position has been uniformly adopted and applied by the Federal Court. See, for example, the Federal Court's instruction in *Atlas Powder Co. v. E.I. du Pont de Nemours and Co.,* 221 U.S.P.Q. 426, (N.D. Texas 1983), *aff'd,* 224 U.S.P.Q. 409, (Fed. Cir. 1984), wherein the court noted that anticipation requires that

each prior art reference contain within its four corners all of the elements of the claimed invention found in substantially the same situation where they do substantially the same work in the same way.

As such, in the absence of a reference that discloses the identical sequence(s) being claimed, the rejection must fail as a matter of law. That the prior art fails to identically disclose the claimed subject matter is clear from the Examiner's own admission that the prior art references are drawn to (a) a Rat sequence which shares (b) only 97% sequence identity with the claimed subject mater. Accordingly, the rejection must fail as a matter of law.

For all the above reasons, Applicants respectfully submit that the claims are allowable over the cited references. In view of the foregoing, the application is now believed to be in proper form for allowance and notice to that effect is earnestly solicited.

If the Examiner believes that a telephone conference would be of value, he is requested to call the undersigned counsel at the number listed below.

Any additional fees required in connection with this submission may be taken from Merck Deposit Account No. 13-2755.

Respectfully submitted,

By _____

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Date: July 29, 2002

VERSION OF AMENDED CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

14. (Amended) A method for determining whether a substance binds $GABA_B$ receptors and is thus a potential agonist or antagonist of the $GABA_B$ receptor that comprises:

(a) providing cells [c1'omprising] comprising an expression vector encoding HG20 and an expression vector encoding $GABA_BR1a$ or $GABA_BR1b$;

(b) culturing the cells under conditions such that HG20 and $GABA_BR1a$ or $GABA_BR1b$ are expressed and heterodimers of HG20 and $GABA_BR1a$ or $GABA_BR1b$ are formed;

(c) exposing the cells to a labeled ligand of $GABA_B$ receptors in the presence and in the absence of the substance;

(d) measuring the binding of the labeled ligand to the heterodimers of HG20 and $GABA_BR1a$ or $GABA_BR1b$;

where if the amount of binding of the labeled ligand is less in the presence of the substance than in the absence of the substance, then the substance is a potential agonist or antagonist of $GABA_B$ receptors.

16. (Amended) A method of producing functional $GABA_B$ receptors in cells comprising:

(a) transfecting cells with:

(1) an expression vector comprising DNA that encodes an HG20 protein [that directs the] under conditions favoring expression of HG20 in the cells; and;

(2) an expression vector comprising DNA that encodes $GABA_BR1a$ or $GABA_BR1b$ [that directs the] under conditions favoring expression of $GABA_BR1a$ or $GABA_BR1b$ in the cells;

(b) culturing the cells under conditions such that heterodimers of HG20 and $GABA_BR1a$ or $GABA_BR1b$ are formed where the heterodimers constitue functional $GABA_B$ receptors.

18. (Amended) A method of expressing a truncated version of HG20 protein comprising:

(a) transfecting a host cell with a expression vector that encodes an HG20 protein that has been truncated at the amino terminus, wherein said protein comprises the amino acid sequence selected from the group consisting of :

Positions 9-941 of SEQ ID. NO. 2
Positions 35-941 of SEQ.ID.NO.:2;
Positions 36-941 of SEQ.ID.NO.:2;
Positions 38-941 of SEQ.ID.NO.:2;
Positions 39-941 of SEQ.ID.NO.:2;
Positions 42-941 of SEQ.ID.NO.:2;
Positions 44-941 of SEQ.ID.NO.:2;
Positions 46-941 of SEQ.ID.NO.:2;
Positions 52-941 of SEQ.ID.NO.:2; and
Positions 57-941 of SEQ.ID.NO.:2;

(b) culturing the transfected cells of step (a) under conditions such that the truncated HG20 protein is expressed.

19. (Amended) A chimeric HG20 protein having an amino acid sequence of HG20 selected from the group consisting of:

Positions 51-941 of SEQ.ID.NO.:2;
Positions 52-941 of SEQ.ID.NO.:2;
Positions 53-941 of SEQ.ID.NO.:2;
Positions 54-941 of SEQ.ID.NO.:2;
Positions 55-941 of SEQ.ID.NO.:2;
Positions 56-941 of SEQ.ID.NO.:2;
Positions 57-941 of SEQ.ID.NO.:2; and
Positions 58-941 of SEQ.ID.NO.:2;

covalently linked at the N-terminus with a [non-HG20] heterologous amino acid sequence.